

Filtration for chlorine-alkali electrolysis unit DOW Deutschland

Background:

The DOW Deutschland Anlagengesellschaft mbH plant in Stade is one of the most important and largest industrial plants.

They specialise in the production of basic and special chemicals.

For the chemical production process, a chlorine-alkali electrolysis unit is operated at the plant, in which cell effluent (a saline sodium hydroxide solution at 80°C) is one of the resulting products, along with chlorine and hydrogen.

The cell effluent may contain problematic wear products such as GRP flakes and sand particles originating from the electrolysis cells and the associated piping systems.

If these unwanted solids are not kept away from the subsequent process steps, reliable and trouble-free operation is no longer guaranteed.

Solution description:

For this reason, DOW has opted for BOLLFILTER and thus for the reliable protection of the production process. Behind the chlorine-alkali electrolysis plant, 2 automatic filters of type 6.18.2 with a nominal connection width of DN 300 are installed in parallel. Each of these automatic filters 650 m³/h with a filter fineness of 1000 µm. These two filters effectively remove GRP flakes and sand from the cell effluent and thus ensure that the subsequent process steps run smoothly. During automatic cleaning, the flushing material first flows through a single filter 1.53.1 with basket sieve (1000 µm) and then back to the automatic filters.

Due to the aggressive environment and the high temperature of 80°C, the filter housings and elements are made entirely of Superduplex to ensure a long-term and robust solution.

Advantages for the customer:

Thanks to the filtration, DOW can rely on a reliable and smooth functioning of their emergency facilities. The system protects internal inventories from blockages caused by high particle concentrations.

System: 2 x BOLLFILTER Automatic Type 6.18.2
1 x BOLLFILTER Simplex Type 1.53.1



BOLLFILTER Automatic Type 6.18.2 DN300



BOLLFILTER Simplex Type 1.53.1



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